

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method of forming a weld between plastics workpieces over a joint region, the method comprising:

providing a radiation absorbing material at the joint region that has an absorption band in the range 780-1500 nm matched to a wavelength of incident radiation so as to absorb the incident radiation and generate heat, the wavelength of the incident radiation being outside the visible range;

exposing the joint region to incident radiation so as to cause melting of the surface of at least one workpiece at the joint region;

allowing the melted material to cool so as to weld the workpieces together;

wherein the workpieces include a first workpiece and a second workpiece, the first workpiece being any one of clear to translucent, the second workpiece being any one of tinted to opaque, and the radiation absorbing material being a radiation absorbing dye that is visually transmissive when the workpieces are welded together and when viewed through the first workpiece,

wherein the radiation absorbing material is selected from the group consisting of cyanine dyes, squarylium dyes, croconium dyes, metal phthalocyanine dyes, metalated azo dyes, and metalated indoaniline dyes.

2. (original): A method according to claim 1, wherein the radiation absorbing material is sandwiched between two workpieces.

3. (original): A method according to claim 1, wherein the radiation absorbing material is provided in at least one of the workpieces.

4. (original): A method according to claim 1, wherein the radiation absorbing material is provided on the substrate by moulding the substrate in a mould with an insert formed by or including the radiation absorbing material.

5. (original): A method according to claim 1, wherein the radiation absorbing material is provided as a coating on the substrate.

6. (original): A method according to claim 1, wherein the radiation absorbing material is provided by coextruding the material with the substrate.

7. (previously presented): A method according to claim 1, wherein the radiation absorbing material is exposed to radiation prior to positioning the workpieces together.

8. (previously presented): A method according to claim 1, wherein the radiation absorbing material is exposed to radiation through one of the workpieces.

9-11. (canceled).

12. (previously presented): A method according to claim 1, wherein the absorption band defines the range 780-1100 nm.

13. (previously presented): A method according to claim 1, wherein the absorption band defines the range 820-860 nm.

14. (canceled).

15. (previously presented): A method according to claim 1, wherein the absorption band does not include the range 400-700 nm.

16. (canceled).

17. (previously presented): A method according to claim 1, wherein the wavelength of the incident radiation lies in the range 700-2500 nm.

18. (original): A method according to claim 17, wherein the wavelength of the incident radiation lies in the range 790-860 nm.

19. (original): A method according to claim 17, wherein the wavelength of the incident radiation lies in the range 940-980 nm.

20. (previously presented): A method according to claim 1, wherein the radiation is a laser beam.

21. (previously presented): A pair of workpieces which have been welded by a method according to claim 1.

22. (previously presented): A method according to claim 1, wherein the workpieces comprise fabrics.

23. (previously presented): A method according to claim 22, wherein the fabrics are nylon-based fabrics.

24. (previously presented): A method according to claim 22, wherein the fabrics are polyurethane coated.

25. (previously presented): A method according to claim 22, wherein the fabrics comprise polyamide/polytetrafluoroethylene laminated fabrics.

26. (canceled).

27. (previously presented): A method according to claim 1, wherein the workpieces are made of thermoplastic.

28. (previously presented): A method according to claim 27, wherein the thermoplastic workpieces are textiles.

29. (previously presented): A method according to claim 1, wherein the workpieces are thermoplastic films.

30-33. (canceled).

34. (previously presented): A method according to claim 1, wherein the wavelength of the incident radiation that is exposed to the joint region is in the range of 700-2500 nm, and the absorption band of the radiation absorbing dye, which is matched to the incident radiation, is in the range of 750-1100.

35. (currently amended): A method according to claim 1, wherein the radiation absorbing material is a radiation absorbing ~~organic~~ dye that is dissolved in use.